

BLACKHAWK ARMSTRONG

OPEN END WRENCHES

Says the Expert Mechanic:

"Blackhawk-Armstrong Open End Wrenches do better, quicker work—last longer—remain bright and shiny after months of shop work—are trim and handy—and priced right!"

A A A A

It's easier to sell him a Blackhawk-Armstrong every time. These tools are drop forged of Chrome Vanadium steel and plated with Chromium over nickel and copper. Their permanent bright finish is matched by the toughness of the steel underneath.

Blackhawk-Armstrong Wrenches are 10% longer than any others made. That means added leverage, easier operation and greater safety. Are guaranteed not to break or spread and any wrench that does not meet this claim under fair usage will be replaced without charge.

Index to Open End Wrenches

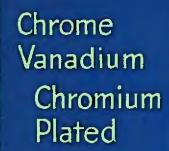
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Blackhawk Mfg. Co.,

Milwaukee, U.S.A.



CATALOG No. 0231



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ENGINEERS WRENCHES

They are made for general purposes on cars—trucks—tractors—farm implements—in fact on all machinery that has nuts to tighten and nuts to take off.

Slip one of these silver blue babies into your hand and then give it a tough job to do on a nut. You'll sell plenty when you find how your mechanic friends will enthuse because of the over-reach in length and the thinness and beauty of design of this fine tool.

Worthy of the name Blackhawk-Armstrong. That means a heap.
(Opposite page shows Engineers' Wrench Set No. 26. See page 8 for dealer board of Engineers' Wrenches.)

A WORD ABOUT CHROMIUM PLATING

Chromium Plating as used on Blackhawk-Armstrong Wrenches is the very newest and best in quality finishes. Used to dress-up lamps, radiator shells and other beauty spots on all fine cars. Will not tarnish or rust.

First polished, then copper plated—buffed—nickel plated—buffed and finally chromium plated and polished.

With all this attention it ought to be a good finish. It is.

Num- ber	For U.S. Std. Nuta; Size Bolts Inches	For Hex Head Cap Screws; Diameter Screws Inches	For S.A.E. Std. Nuts and Cap Screws: Dia. Screws Inches	Openings Milled Inches	Extreme Length Inches	Thick- ness Heads Inches	Price Chromium Finished	Num- ber
1020 1721 1021 1722 1723	1/8 1/8 & 3/16 1/8	1/8 & 1/4	1/4	1/0 & 5/16 5/16 & 3/8 5/16 & 13/32 5/16 & 7/16 3/8 & 7/16	3 5-1/2 5-1/2 5-1/2 5-1/2	5/32 13/64 13/64 13/64 13/64	\$0.65 .70 .70 .70	1020 1721 1021 1722 1723
1022 1023 1723A 1024 1725 1725A	3/16 & 1/4 3/16 & 5/16 1/4	1/8 & 5/16 5/16 3/16 & 5/16 1/4 & 5/16	1/4 1/4 5/16 5/16 5/16 5/16 1/4 & 5/16	5/16 & 1/2 13/32 & 1/2 3/8 & 1/2 13/32 & 19/32 7/16 & 1/2	6 6 6-1/2 6-1/2	7/32 7/32 7/32 1/4 1/4	,80 ,80 ,80 ,95 ,95	1022 1023 1723A 1024 1725 1725A
1725B 1025 1726 1026 1026	1/4 1/4 & 5/16 1/4 1/4 & 3/8	5/16 & 3/8 5/16 5/16 & 7/16 5/16 & 7/16 3/8 & 7/16	5/16 & 3/8 5/16 5/16 & 7/16 5/16 & 7/16 3/8 & 7/16	1/2 & 9/16 1/2 & 19/32 1/2 & 5/8 1/2 & 11/16 9/16 & 5/8	6-1/2 6-1/2 7	1/4 1/4 9/32 9/32 9/32	.95 .95 1.20 1.20	1725B 1025 1726 1026 1727
1027 1027 C 1728 1028 1028 S	5/16 & 3/8 3/8 5/16 & 7/16 7/16	3/8 3/8 & 1/2 7/16	3/8 3/8 & 1/2 7/16	3/8 & 7/16 5/16 & 1/2 13/32 & 1/2 3/8 & 1/2 3/8 & 1/2 7/16 & 19/32 7/16 & 9/16 1/2 & 9/16 1/2 & 19/32 1/2 & 5/8 1/2 & 5/8 1/2 & 11/16 9/16 & 5/8 19/16 & 11/16 9/16 & 3/4 19/32 & 25/32 5/8 & 25/32 5/8 & 3/4	7 7 8 8 8 8	9/32 9/32 5/16 5/16 5/16	1.20 1.20 1.45 1.45 1.45	1027 1027C 1728 1028 1028S
1729 1029 1030 1731	240 8 7/16	1110 1110		11/16 6 05/20		2/12	1.45 1.45 1.45 1.90	1729 1029 1030 1731
1731 A 1031 1731 B 1032 1033 A	7/16 & 1/2 7/16 & 9/16 1/2	1/2 & 5/8 5/8 9/16 & 5/8	9/16 9/16 9/16 & 5/8	11/16 & 25/32 11/16 & 7/8 3/4 & 13/16 3/4 & 7/8 25/32 & 7/8 13/16 & 7/8 25/32 & 31/32 7/8 & 15/16 7/8 & 31/32 7/8 & 1 15/16 & 1 7/8 & 1-1/16	9-1/2 9-1/2 9-1/2 9-1/2 9-1/2	3/8 3/8 3/8 3/8 3/8	1.90 1.90 1.90 1.90	1731A 1031 1731B 1032 1033A
1033 1733 1033C 1034 1734	1/2	5/8 & 7/8	9/16	7/8 & 1-1/8	10 7/4	7/16	1.90 2.60 2.60 2.60 2.60	1033 1733 1033C 1034 1734
1035 1735 1036 1736 1037	9/16 & 5/8 9/16 & 3/4 3/4 5/8 & 3/4	3/4 & 7/8 3/4 & 1 7/8 & 1	11/16	31/32 & 1-1/16 1 & 1-1/8 31/32 & 1-1/4 1 & 1-1/4 1-1/16& 1-1/4	10-3/4 12-1/4 12-1/4	7/16 1/2 1/2 1/2 1/2 1/2	2.60 3.60 3.60 3.60 3.60	1035 1735 1036 1736 1037
1737	3/4	7/8 & 1	7/8	1-1/8 & 1-1/4	12-1/4	1/2	3.60	1737

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BLACKHAWK-ARMSTRONG "S" WRENCHES

221/2° Angle, Double Head

Num- ber	For U.S. Std. Nuts; Size Bolts	For Hex Head Cap Screws; Diam. Screws	For S. A. E. Std. Nuts and Cap Screws; Size Bolts	Openings Milled	Extreme Length, Approx.	Weight Each, lbs.	Thickness Heads	Price Chromium Finished	Num- ber
1075B 1075A 1075A 1077S 1077B 1077B 1077B 1079B 1079C 1081B 1081B 1081A 1083B 1083B 1083B 1083B	3/16 & 1/4 1/4 1/4 1/4 5/16 3/8 3/8 3/8 1/2 1/2 1/2 5/8 & 3/4 3/4	3/8 & 7/16 3/8 7/16 7/16 & 1/2 1/2 & 9/16 1/2 & 5/8	1/4 5/16 5/16 5/16 & 3/8 5/16 & 3/8 5/16 & 7/16 3/8 7/16 3/8 7/16 & 1/2 1/2 & 9/16 11/2 9/16 & 11/16 5/8 & 11/16 11/16 3/4 & 7/8	3/8 & 7/16 3/4 & 1/2 13/32 & 1/2 7/16 & 1/2 1/2 & 9/16 1/2 & 5/8 9/16 & 19/32 9/16 & 5/8 9/16 & 11/16 5/8 & 11/16 5/8 & 3/4 11/16 & 27/32 3/4 & 7/8 27/32 & 15/16 7/8 & 1 15/16 & 1 1 & 1-1/8 & 1-1/4	6-1/4 6-1/4 7-1/4 7-1/4 7-1/4 8-1/4 8-1/4 8-1/4 8-1/4 9-1/4 9-1/4 9-1/4 9-1/8 10-3/8 10-3/8 10-3/8	1/6 1/6 1/6 1/4 1/4 1/2 1/2 1/2 1/2 1/2 3/4 3/4 3/4 1 1	1/4 1/4 1/4 9/32 9/32 9/32 5/16 5/16 5/16 5/16 3/8 3/8 3/8 7/16 7/16 7/16 1/2 1/2	\$1.05 1.05 1.40 1.40 1.40 1.70 1.70 2.05 2.05 2.70 2.70 2.70 2.70 3.75 3.75	1075B 1075A 1075A 1075 1077B 1077B 1077B 1079C 1079C 1081 1081B 1081A 1083B 1083A 1083A 1085C 1085B

Blackhawk-Armstrong "S" Wrenches are drop-forged of chrome-vanadium steel and heat-treated. These wrenches are long and light as compared to their capacities. The jaws are narrow and can get at the nut that is placed in close quarters. They are finished in chromium with heads buffed bright.



ENGINEERS WRENCH SETS

Here's our most popular set. Consists of 6 pieces selected for the wide range of work they'll do.

The roll is of duotone green-gray leatherette. Handsome in appearance—almost as good looking as the wrenches in it. Carry this set in your pocket to show and sell.

Contents

One each of following numbers: 1723 — 1025 — 1027C — 1028S — 1731A — 1033C.

(For description see opposite page)

No. 26CB—In cardboard box Price \$8.80

No. 26LR—In leatherette roll Price 9.95

Weight 3 lbs., 6 ozs.

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BLACKHAWK MFG. CO., MILWAUKEE, U.S.A.





THESE OBSTRUCTION WRENCHES HAVE OPENINGS ON SAME SIDE

The Obstruction Wrench snakes itself into hard places where ordinary wrenches won't go—not necessary to remove interferences. Has narrow pointed jaws—projecting from same side of handle. Strong—comfortable to use, has openings at 85° angle.

Num- ber	For U.S. Std. Nuts Size Bolts	For Hex Head Cap Screws; Diameter Screws	For S.A.E. Std. Nuts and Cap Screws; Diam. Screws	Openings Milled	Extreme Length, Approx.	Thick- ness Heads	Price Chromium Finished	Num- ber
2725A 2725B 2025 2726 2026 2727 2027 2027C 2728 2028 2028S 2729	1/4 1/4 & 5/16 1/4 1/4 & 3/8 5/16 & 3/8 5/16 & 7/16 7/16	1/8 & 5/16 3/16 & 5/16 3/16 & 5/16 1/4 & 5/16 1/4 & 3/8 5/16 & 3/8 5/16 & 7/16 5/16 & 7/16 5/16 & 7/16 5/16 3/8 & 7/16 3/8 & 1/2 7/16 & 1/2 7/16 & 1/2 5/8 1/2 & 5/8 9/16 & 5/8 9/16 & 5/8	9/16	5/16 & 13/32 5/16 & 7/16 3/8 & 7/16 5/16 & 1/2 13/32 & 1/2 13/32 & 1/2 13/32 & 1/3 7/16 & 9/16 1/2 & 9/16 1/2 & 19/32 1/2 & 11/16 9/16 & 5/8 1/2 & 11/16 9/16 & 5/8 1/2 & 11/16 9/16 & 5/8 1/2 & 11/16 9/16 & 5/8 1/2 & 5/8 1/2 & 5/8 1/2 & 5/8 1/16 & 1/16 9/16 & 5/8 1/16 & 1/16 9/16 & 5/8 1/16 & 1/16 9/16 & 5/8 11/16 & 7/8 25/32 & 31/32 5/8 & 25/32 11/16 & 7/8 25/32 & 31/32 7/8 & 5/8	4-1/4 4-3/4 4-3/4 5-1/2 5-1/2 5-1/2 5-1/2 6-1/2 6-1/2 6-1/2 7-3/4 7-3/4 7-3/4 7-3/4 9-1/4 9-1/4	13/64 13/64 13/64 13/64 13/64 13/64 15/64 15/64 15/64 15/64 17/64	\$0.70 .70 .70 .70 .80 .80 .80 .95 .95 .95 .95 .95 .1.20 1.20 1.20 1.20 1.45 1.45 1.45 1.45 1.45 1.45 1.90 1.90	2721 2021 2722 2723 2022 2023 2723A 2024 2725A 2725B 2025 2726 2026 2727 2027 C 2728 2028 2028 2028 2028 2029 2030 2731 2731 B 2033 2733 A 2033 2033 2033

OBSTRUCTION WRENCH SETS

Mechanics will welcome this Set. Present day automobile designs present numerous obstacles to most wrenches. The No. 2005 Set provides the wrenches that makes rapid and efficient work possible in those close quarters.

Contents:



Page Four

CHAWK-ARMSTRONG WRENCHES

CHROME VANADIUM - CHROMIUM PLATED

THESE TAPPET WRENCHES ARE LONGER AND STRONGER

The length of these wonderful wrenches allows extreme leverage, and makes tappet adjustment possible while the motor is hot. Try them on a smoking motor and convince yourself.

Two styles are provided — (1) Both ends milled with same opening. (2) Different sized openings on same wrench.

Assortment in each wrench set is designed to give greatest usefulness from a smaller number of tools. Design of the wrench is such that two may be handily worked as a scissors in one hand and a third in the other.



TAPPET WRENCH SETS 412 CB AND 412 LR

These wrenches have same size opening on each end-One end straight the other with 221/2° angle. Will adjust 75% of all valve tappets made. Two each of four most used numbers put up in the lasting leatherette case.

Contents—2 each: 402, 403, 404, 405.

No. 412CB—In cardboard box......Price \$15.20 No. 412LR—In leatherette roll......Price 16.35 Weight 2 lbs., 6 oz.

ECONOMY SET

Weight 134 lbs.

No,	Milled Open- ing	S.A.E. Std. Nuts Bolt Size	U.S.S. Nuts Bolt Size	Ex- treme Lgth,	Thick- ness of Head	Price Chrom ium Fin- ished
401 401A 402 402A 403 403A 404 405 406 406A 407 407A 408A	3/8 7/16 1/2 17/32 9/16 19/32 5/8 11/16 3/4 25/32 13/16 7/8 15/16 31/32	1/4 5/16 3/8 7/16 1/2 9/16 5/8	5/16 3/8 7/16 1/2 9/16	8 8-1/2 8-1/2 8-1/2 8-1/2 8-1/2 8-1/2 8-1/2 9 9 9 9 9 9	5/32 5/32 5/32 5/32 5/32 5/32 5/32 3/16 3/16 7/32 7/32 7/32 7/32 7/32 7/32	\$1.80 1.80 1.80 1.80 2.00 2.00 2.25 2.25 2.25 2.50 2.50

402B	14	1/4 1/6	8½ 8½ 8½ 8½ 9	A A A A A A A A A A A A A A A A A A A	\$1.80 1.80 2.00 2.00 2.25
406B 显然是指自然是是 406C 次级是据 音表统	1/2	73	9	37	2.25

ECONOMY SERIES TAPPET WRENCHES

422	172 176 272	\$1.15 1.15 1.30 1.45
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TAPPET WRENCH SETS

400 CB AND 400 LR

A smaller set fewer wrenches-but more sizes-less duplication. Has different sized opening on each end. Kit has two extra pockets.

Contents—1 each: 402B, 402C, 404B, 404C, 406B, 406C.

No. 400CB-In cardboard box.

Price\$12.10 No. 400LR-In

leatherette roll. Price 13.25

Weight 11/4 lbs.



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BLACKHAWK MFG. CO., MILWAUKEE, U.S.A.



IGNITION SERVICE WRENCHES AND SETS



The tools pictured above meet with the approval of Ignition and Radio experts. All tools shown are neatly contained in the two-tone gray-green leatherette case.

Show this No. 18 Set to all those who handle ignition work — it contains all tools for work on most popular electrical systems.

Set contains all the tools listed below.

No. 18CB—In cardboard boxPrice \$6.30

No. 18LR—In leatherette rollPrice 7.00

Weight 10 oz.

PRICES ON INDIVIDUAL IGNITION WRENCHES

No.	Size Opening	Used for	Price
E-2	1/4"×1/4"	Northeast, Splitdorf, and Bosch	\$0.50
E-3	14" (31" & ##")	Eiseman	.50
E-4	Ye."	Remy & Wagner	.50
E-5 E-6 E-7	78" 73" (34")	Remy & Wagner Ford (Third Brush) Bosch (DU4 & DU6)	.50 .75
	33 (74 7	Autolite	.65
E-8	" Sr 2" "E"	Delco Remy	.65
E-9	1/2"	Remy (Cam)	.65
E-10	18" & 11"	Autolite (Generator)	.65
E-11	1/4" & 32"	Bosch	.95

WATER PUMP WRENCHES

Designed especially for adjusting Water Pump packing nuts—very thin with short stroke. Illustrated above.

Num- ber	Milled Opening	Len- gth	Thickness of Head	Width of Head	Price
1224	3/4	7	1/4	1-7/8	\$2,10
1224A	1-1/8	7	1/4	1-7/8	2,10
1226	13/16	7	1/4	1-7/8	2.10
1228	7/8	7	1/4	1-7/8	2.10
1230	15/16	7	1/4	1-7/8	2.10
1232	1	7	1/4	1-7/8	2.10
1232A	1-1/32	7	1/4	1-11/16	2.10
1234	1-1/16	7	1/4	1-7/8	2.10
12368	1-5/16	7	1/4	2-1/16	2,10
1238	1-3/16	7	1/4	2-1/16	2.10
1240	1-1/4	7	1/4	2-1/16	2.10
1244	1-3/8	7-3/4	9/32	2-5/8	2,40
1246	1-7/16	7-3/4	9/32	2-5/8	2.40
1248	1-1/2	7-3/4	9/32	2-5/8	2.40
1250	1-9/16	7-3/4	9/32	2-5/8	2.40
1252	1-5/8	7-3/4	9/32	2-5/B	2.40
1255	1-3/4	7-3/4	9/32	2-5/8	2.40

MINIATURE WRENCHES AND SETS

Those tough baby nuts give up the fight when you clamp down hard with the miniature Blackhawk - Armstrong wrench.

Drop one of these sets in your coat pocket, and give the mechanics in your territory an eyetreat.

No. 20 Set contains one each of the wrenches in table below:



No.	Milled Opening	Thick- ness Heads	Price Chromium Finished
H-10 H-12 H-14 H-16 H-18	18 & 25 14 & 15 16 & 16 18 & 16	32 32 72 74 32 32	\$0.65 .65 .70 .70

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WAWK-ARMSTRONG WRENCHES



CHROME VANADIUM - CHROMIUM PLATED



BRAKE WRENCHES AND SETS



No. 2534—For Chrysler Cars. 318" long, 58" opening, head 32" thick. Price each\$0.90

No. 2536-For Studebaker Cars. 4%" long. %" opening, head 32" thick. Price each\$1.25



Length 61/4", heads 32" thick. Application given in table be-

Num- ber	Opening in 22½ ° end	Opening in 60° end	Applica- tion	Price Each
2526 2526A 2526B 2537	5/8" 9/16" 11/16" 1/2"	5/8" 9/16" 11/16" 9/16"	Locklieed General General La Salle	\$1.50 1.50 1.50 1.50
2537A	7/16"	1/2"	External Mechanical	1.50
2538	9/16"	1/2"	La Salle	1.50

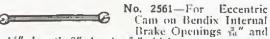


No. 2542—For Chevrolet Cars. 7½" long, openings 58" - ¾", head 32" thick.

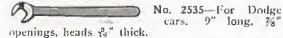


No. 2539 — For all Bendix Brakes, 7" long, openings, small end 14" - 14", large

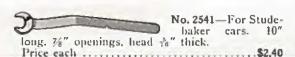
end 34", heads sh" thick.



Cam on Bendix Internal Brake Openings &" and 4", length 9", heads &" thick. Price each\$1.80



No. 426-For Cadillac, La Salle, etc., Openings 34" and 38", length 9", heads 32" thick.



NO. 37S BRAKE SET



When the mechanic sees this Brake Wrench Set, he will be convinced that it's what he needs for brake adjustments on any car. Packed in a sturdy steel case. This set contains one each of the following: Nos. 2534, 2537A, 2526B, 2526, 2526A, 426, 2561, 1731BR, 1034BR, 1735BR, 4014XN, 2103.

NO. 35 BRAKE SET

Here's a set for every Brake Service Station attendant. It provides the tools to do the most efficient brake adjustment on any car in the shortest time.

The 35 Set contains one each of Nos. 2534, 2536, 2539, 2535, 2541, 2542, 2537, 2538, 2526.

No. 35CB-In cardboard box Price \$13.85 No. 35LR-In leatherette roll Price 15.35 Weight 2 lbs., 8 oz.



No. 1731BR-Used on Lockheed Hydrau-

lics, Bendix and other Mechanical brakes. Openings 34" and 38", length 15", heads 34" thick. l'rice each\$3.80

No. 1034BR—Similar to above. Openings 11" and 11", length 16", heads 12" thick. Price each

No. 1735BR—Similar to above. Openings 1" and 11/8", length 16", head 1/2" thick. Price each\$5.00

No. 2103-For Bendix and Steeldraulic internal brake. 9" long, 2½" offset. Hex Offset Wrench-

Price each ...

Price each ...

No. 4014XN—Ford Brakes. Opening 74", ½" square, length 9½".\$1.35

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CHROME VANADIUM - CHROMIUM PLATED



BUILD CONSISTENT WRENCH PROFITS THROUGH THESE AUTOMATIC SALESMEN



No. 60 Board

Easy sales of open end wrenches are made with the attractive four color steel-front salesmen shown. Each assortment is a skeleton stock of most popular numbers. Assures turnover and profit.

The No. 60 Board (shown at left). Contents of the 3 general dealer boards given below:

No. 60 assortment includes 92 tools, 4 each of following: Engineers wrenches Nos. 1021, 1723, 1025, 1027C, 1028S, 1731A, 1033C, 1725B, 1727, 1729, 1731B; Obstruction wrenches. Nos. 2021, 2723, 2025, 2027C, 2028S, 2731A, 2731B; and Tappet wrenches Nos. 401A, 402, 403, 404, 405.

No. 60A assortment includes 46 tools, 2 each of the above numbers. Size of display 21" wide x 59" high.

No. 60—Board assortment, weight 39 lbs. List \$132.80 No. 60A—Board assortment, weight 18 lbs. List 72.40 (Weight of board 35 lbs.)

The No. 70 Board is a de luxe assortment for the larger distributor. Size of display 22" wide x 78" high. Stock includes 157 tools, 3 each of the following: Engineers wrenches, Nos. 1021, 1723, 1023, 1723A, 1725, 1725A, 1725B, 1025, 1026, 1027, 1027C, 1727, 1728, 1028S, 1729, 1029, 1731A, 1033A, 1033C; Obstruction wrenches Nos. 2721, 2723, 2723A, 2725A, 2025, 2027C, 2028S, 2731A; Tappet wrenches Nos. 402, 402A, 403, 403A, 404, 404A, 405, 402B, 402C, 404B, 404C, 406B, 406C; Miniature wrenches Nos. H10, H12, H14, H16, H18; 1 each of the following Brake wrenches: Nos. 2526, 2534, 2535, 2536, 2537, 2538, 2539, 2541, 2542 and Water Pump wrenches Nos. 1224, 1224A, 1228, 1232, 1232A, 1234, 1236, 1240, 1242, 1246,

No. 70—Board assortment, weight 45¼ lbs.List \$218.90 (Weight of board 53 lbs.)

TAPPET WRENCH DISPLAY BOARDS

Should be on display in every Parts House—Automotive Supply and Hardware Store. Investment offers splendid profit possibilities—though extremely reasonable. Metal-front board is of same attractive finish as larger display units. Ideal for floor or counter. Size of display 16½" wide, 23" high.

No. 46 assortment includes 48 Tappet wrenches, 6 each of Nos. 402, 402A, 403, 403A, 404, 405, 406, 407.

No. 43 assortment includes 24 Tappet wrenches, 3 each of the numbers above.

No. 46—Board assortment, weight 13 lbs. List \$94.20

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Nos. 43 & 46 Board

Form 0231-211-22